

ROCKY FLATS SITE

REGULATORY CONTACT RECORD

Purpose: Discussion and approval of exploratory excavations to greater than 3 feet below grade around the former Interceptor Trench Pump House

Contact Record Approval Date: June 6, 2007

Site Contact(s) / Affiliation(s):

Scott Surovchak / DOE, John Boylan / S.M. Stoller, Linda Kaiser / S.M. Stoller, Jody Nelson / S.M. Stoller

Regulatory Contact(s) / Affiliation(s):

Carl Spreng / CDPHE

Discussion:

The Solar Ponds Plume Treatment System (SPPTS) collects and treats water contaminated with nitrate and uranium. Effluent from this system is discharged at the Solar Ponds Plume Discharge Gallery (DG) via remnants of the pre-existing Interceptor Trench System (ITS). Although only low concentrations of residual nitrate and uranium are in the system effluent, concentrations of these constituents in water at the DG are elevated, often exceeding concentrations in untreated SPPTS influent. These elevated concentrations contribute to contaminant levels in North Walnut Creek. For future compliance purposes and to reduce long-term operation and maintenance costs, the source(s) of this higher-concentration water, and possible replacement of the existing SPPTS with a more efficient system in the originally-proposed valley-bottom location, should be evaluated.

Resolution:

Additional sources of ground water that may contribute to elevated concentrations of nitrate and uranium monitored at the DG will be investigated by using a backhoe or similar equipment to "pothole" around the location of the former Interceptor Trench Pump House (ITPH). Specific targets include the main western manifold of the ITS, the associated connection to the DG, and the main eastern manifold of the ITS. Some sources indicate these manifolds are constructed of perforated pipe, possibly gravel-wrapped, suggesting the elevated nitrate and uranium reported at the DG may be due to hillside contamination intercepted by the manifolds or remnants of the ITS feeder lines. Alternatively, the source may be the ITPH area itself, since water with elevated concentrations of nitrate and uranium saturated this area on many occasions during ITS and ITPH operation. Finally, the eastern manifold of the ITS, which is fed by lines that were not intercepted by the SPPTS intercept trench, may also contribute to the DG.

The targets described above are expected to be deeper than three (3) feet below ground surface (ft bgs), but are not expected to be deeper than approximately 8 ft bgs. Once located, pipes will be inspected for perforations/wrapping and other construction details; surveyed for x, y, and z coordinates; and if appropriate, the pipes will be penetrated and water flow will be measured. Samples may also be collected if conditions are favorable for this activity.

Because the hillside in which the ITS and SPPTS are located is typically dry and consists of clayey colluvium overlying tight claystone, performing this work during the wetter spring months is desirable in order to collect the maximum amount of data.

An email discussing the potholing was provided on May 10, 2007 to Carl Spreng, CDPHE. This email and his authorizing response, dated May 11, 2007, are attached.

Contact Record Prepared by: John Boylan

Distribution:

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Supplementary Information Regarding Excavation

CDPHE has requested that the following information be included in contact records for soil excavation.

1 - Provide information about any remaining subsurface structures in the vicinity so that the minimum cover assumption won't be violated (or state that there are none if that is the case)-

The exploratory excavation is in the vicinity of the former Interceptor Trench Pump House (ITPH) known as building 308D. The building was removed as documented in the 9/22/03 Type 1 Facility Closeout Report for Buildings 308B and 308D. The closeout report indicates that utilities were disconnected and capped three feet below grade.

2 - Provide information about any former IHSSs/PACs or other known soil or groundwater contamination in the vicinity (or state that there is no known contamination)-

The closeout report indicates that there is no contamination of remaining soils, and this area was not an IHSS. The RI/FS Nature and Extent of Soil Contamination Figures do not indicate soil contamination in this area. Ground water in the vicinity is impacted by the Solar Ponds Plume. Any ground water that is encountered will be collected from the excavation if necessary to conduct the investigative work and be treated in the Solar Ponds Plume Treatment System.

3 - Resurvey any new surface established in subsurface soil, unless sufficient existing data is available to characterize the surface (or state that the excavated soil will be replaced and the original contours restored)-

All excavated soils will be returned to the excavation and original contours restored.